

## WHAT IS CLAIMED IS:

1. An electron beam lithography method comprising:  
extending widths of a plurality of stripes which divide a region where an electron  
beam exposure is to be performed, so that the stripes overlap adjacent stripes at  
5 boundaries between the stripes; and  
sequentially performing electron beam exposure for each of the stripes.
2. The electron beam lithography method of claim 1, wherein a scan dose of an  
electron beam in an extended region of a stripe is less than a scan dose of the electron  
10 beam for a non-extended region of the stripe.
3. The electron beam lithography method of claim 2, wherein the scan dose of the  
electron beam for the extended region of a stripe is half the scan dose of the electron  
beam for the non-extended region of the stripe.  
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4. The electron beam lithography method of claim 2, wherein the scan dose of the  
electron beam for the extended region of the stripe is reduced in a stepwise manner  
toward an adjacent stripe.
- 20 5. An electron beam lithography method comprising:  
extending widths of a plurality of stripes which divide a region where an electron  
beam exposure is to be performed, so that the stripes overlap adjacent stripes at  
boundaries between the stripes;  
moving overlap regions of the stripes; and

sequentially performing the electron beam exposure on each of the stripes at least two times.

6. The electron beam lithography method of claim 5, wherein a scan dose of an electron beam for an extended region of a stripe is less than a scan dose of the electron beam for a non-extended region of the stripe.

7. The electron beam lithography method of claim 5, wherein a scan dose of an electron beam for an extended region of a stripe is half of a scan dose of the electron beam for a non-extended region of the stripe.

8. The method of claim 6, wherein the scan dose of the electron beam for the extended region of the stripe is reduced in a stepwise manner toward an adjacent stripe.

9. An electron beam lithography method comprising:

extending widths of a plurality of stripes which divide a region where an electron beam exposure is to be performed, so that the stripes overlap adjacent stripes at boundaries between each of the stripes;

sequentially performing a first electron beam exposure for each of the extended stripes;

moving overlap regions of the stripes by moving the stripes; and

sequentially performing a second electron beam exposure for each of the moved stripes.

10. The electron beam lithography method of claim 9, wherein a scan dose of an electron beam for an extended region of a stripe is less than a scan dose of the electron beam for a non-extended region of the stripe.

5 11. The electron beam lithography method of claim 10, wherein the scan dose of the electron beam for the extended region of the stripe is half the scan dose of the electron beam for the non-extended region of the stripe.

12. The electron beam lithography method of claim 10, wherein the scan dose of  
10 the electron beam for the extended region of the stripe is reduced in a stepwise manner toward an adjacent stripe.

13. The electron beam lithography method of claim 9, wherein the first and second electron beam exposures are performed at half a target dose.

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